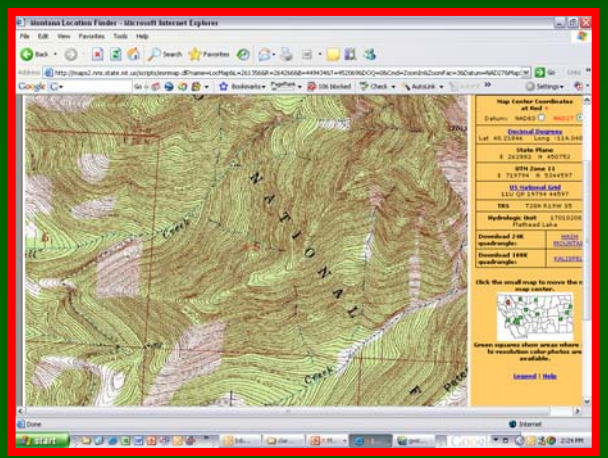
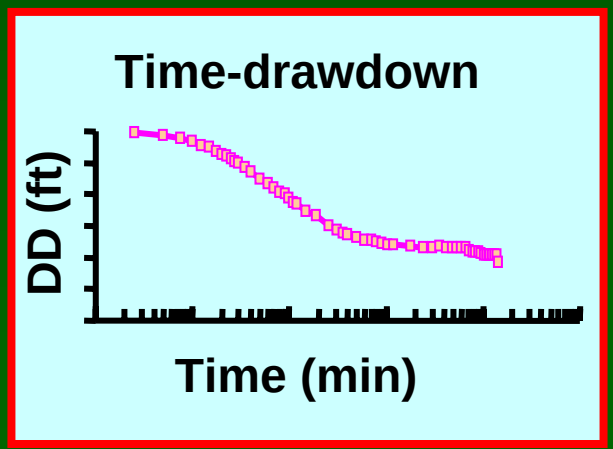
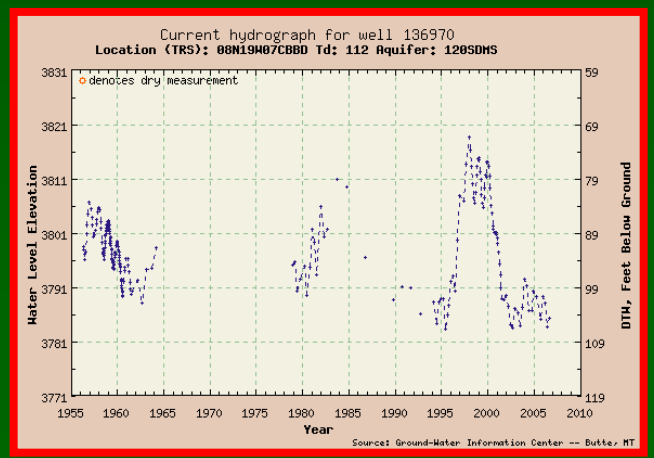
Data and Infrastructure

- Water well locations
- Aquifer tests
- Monitoring network infrastructure







Water well log locations

Well ID# _____
rk done within the borehole and
r and filed with DNRC within 60
is not accomplished by the filing
and Geology (Butte) and water right
information in the REMARKS section.
ter level is lowered below static level.
ll be from the top of the well casing.
inutes since pumping stopped.
m set at 329 ft. for 1 hours
s/min. Recovery water level 23 ft.
of drawdown after _____ hours
s/min. Recovery water level _____ ft.

Using the well address as a clue and the Cadastral database, this well really is in T05S, R12W, 17.

Which plots near…

…

should solve some of these problems…

Water well log locations

…that's true, but there are some advantages and some disadvantages:

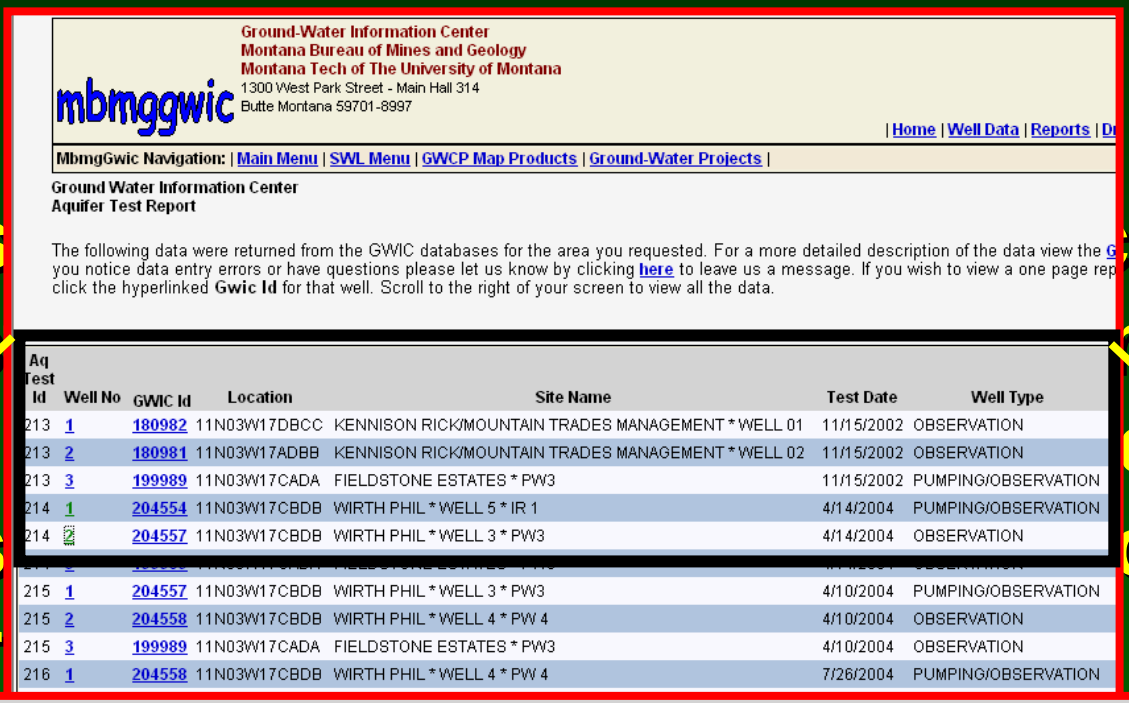
- **Punctuation: if latitude is written 47.54438° but is really 47° 54.438' or 47° 54' 43.8" – the wells will be reported in widely different locations.**
- **The driller tends to not provide a lot-block, TRS, or other information that corroborates the well location.**

Water well log locations

Montana needs to develop training and methods to improve the ability of the water-well driller to accurately report well log locations.

Aquifer tests

- Trans… …tivity, and s… …ne more … …er users … …ound-water …



Ground-Water Information Center
Montana Bureau of Mines and Geology
Montana Tech of The University of Montana
1300 West Park Street - Main Hall 314
Butte Montana 59701-8997

mbmggwic

| Home | Well Data | Reports | D…

MbmgGwic Navigation: | Main Menu | SWL Menu | GWCP Map Products | Ground-Water Projects |

Ground Water Information Center
Aquifer Test Report

The following data were returned from the GWIC databases for the area you requested. For a more detailed description of the data view the G… you notice data entry errors or have questions please let us know by clicking here to leave us a message. If you wish to view a one page rep… click the hyperlinked **Gwic Id** for that well. Scroll to the right of your screen to view all the data.

Aq Test Id	Well No	GWIC Id	Location	Site Name	Test Date	Well Type
213	1	180982	11N03W17DBCC	KENNISON RICK/MOUNTAIN TRADES MANAGEMENT * WELL 01	11/15/2002	OBSERVATION
213	2	180981	11N03W17ADBB	KENNISON RICK/MOUNTAIN TRADES MANAGEMENT * WELL 02	11/15/2002	OBSERVATION
213	3	199989	11N03W17CADA	FIELDSTONE ESTATES * PW3	11/15/2002	PUMPING/OBSERVATION
214	1	204554	11N03W17CBDB	WIRTH PHIL * WELL 5 * IR 1	4/14/2004	PUMPING/OBSERVATION
214	2	204557	11N03W17CBDB	WIRTH PHIL * WELL 3 * PW3	4/14/2004	OBSERVATION
215	1	204557	11N03W17CBDB	WIRTH PHIL * WELL 3 * PW3	4/10/2004	PUMPING/OBSERVATION
215	2	204558	11N03W17CBDB	WIRTH PHIL * WELL 4 * PW 4	4/10/2004	OBSERVATION
215	3	199989	11N03W17CADA	FIELDSTONE ESTATES * PW3	4/10/2004	OBSERVATION
216	1	204558	11N03W17CBDB	WIRTH PHIL * WELL 4 * PW 4	7/26/2004	PUMPING/OBSERVATION

Aq Test Id	Well No	GWIC Id	Location	Site Name	Test Date	Well Type
213	1	180982	11N03W17DBCC	KENNISON RICK/MOUNTAIN TRADES MANAGEMENT * WELL 01	11/15/2002	OBSERVATION
213	2	180981	11N03W17ADBB	KENNISON RICK/MOUNTAIN TRADES MANAGEMENT * WELL 02	11/15/2002	OBSERVATION
213	3	199989	11N03W17CADA	FIELDSTONE ESTATES * PW3	11/15/2002	PUMPING/OBSER
214	1	204554	11N03W17CBDB	WIRTH PHIL * WELL 5 * IR 1	4/14/2004	PUMPING/OBSER
214	2	204557	11N03W17CBDB	WIRTH PHIL * WELL 3 * PW3	4/14/2004	OBSERVATION

Produces detailed aquifer test data

Aquifer tests

Under development:

Time-drawdown plots to help users determine utility of data and results.

Aquifer Test Well Data

Test Id 214

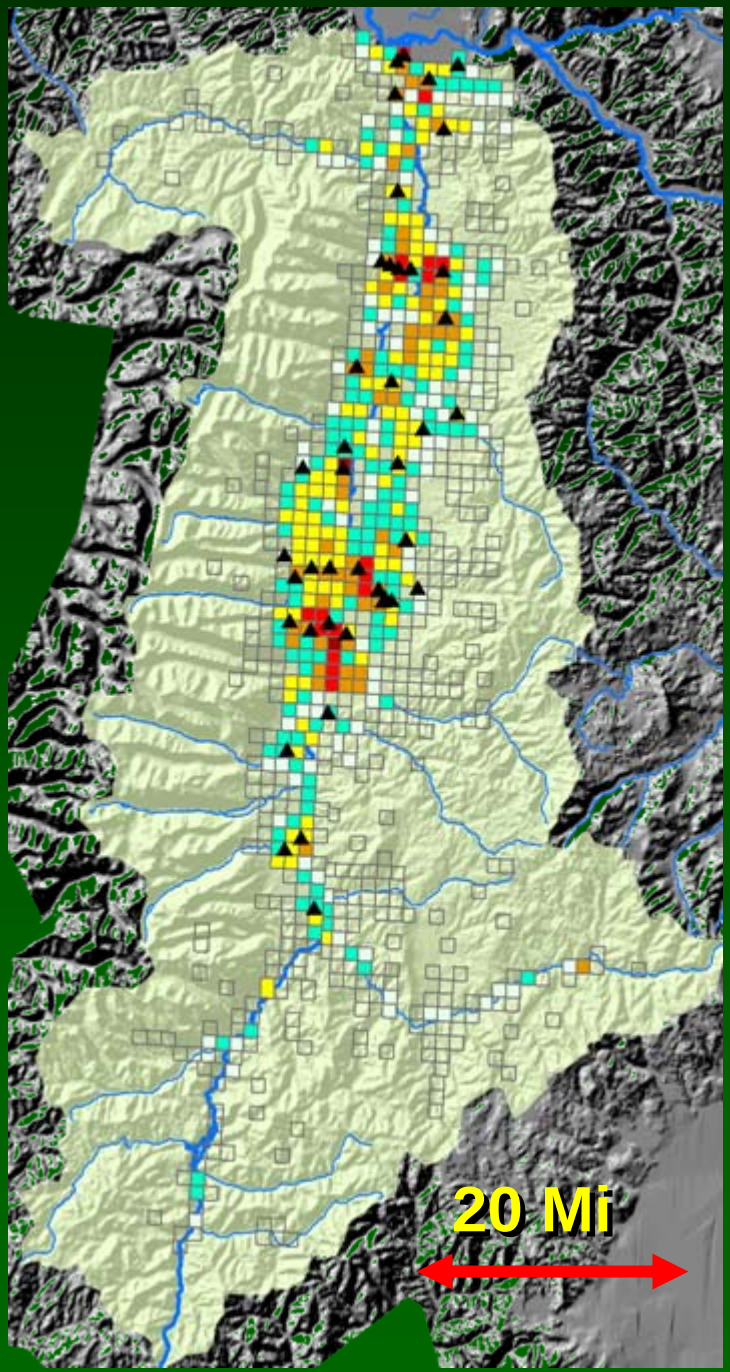
Time Since Start	Time Since Stop					
0.000						
0.250						
0.500		39.960	0.350			
0.750		40.090	0.480			
1.000		40.200	0.590			
1.250		40.300	0.690			
1.500		40.380	0.770			
1.750		40.450	0.840			
2.000		40.520	0.910			
1200.000		43.820	4.210			
1260.000		43.820	4.210			
1320.000		43.820	4.210			
1380.000		43.820	4.210			
1440.000		43.830	4.220			PUMP OFF AT 1,440 MINU
1440.250	0.250			43.730	4.120	INITIAL RECOVERY WATE
1440.500	0.500			43.500	3.890	
1440.750	0.750			43.350	3.740	
1441.000	1.000			43.240	3.630	
1441.250	1.250			43.130	3.520	
1441.500	1.500			43.050	3.440	
1441.750	1.750			42.970	3.360	
1442.000	2.000			42.890	3.280	

Aquifer tests

Total number of aquifer tests in the Clark Fork **?**

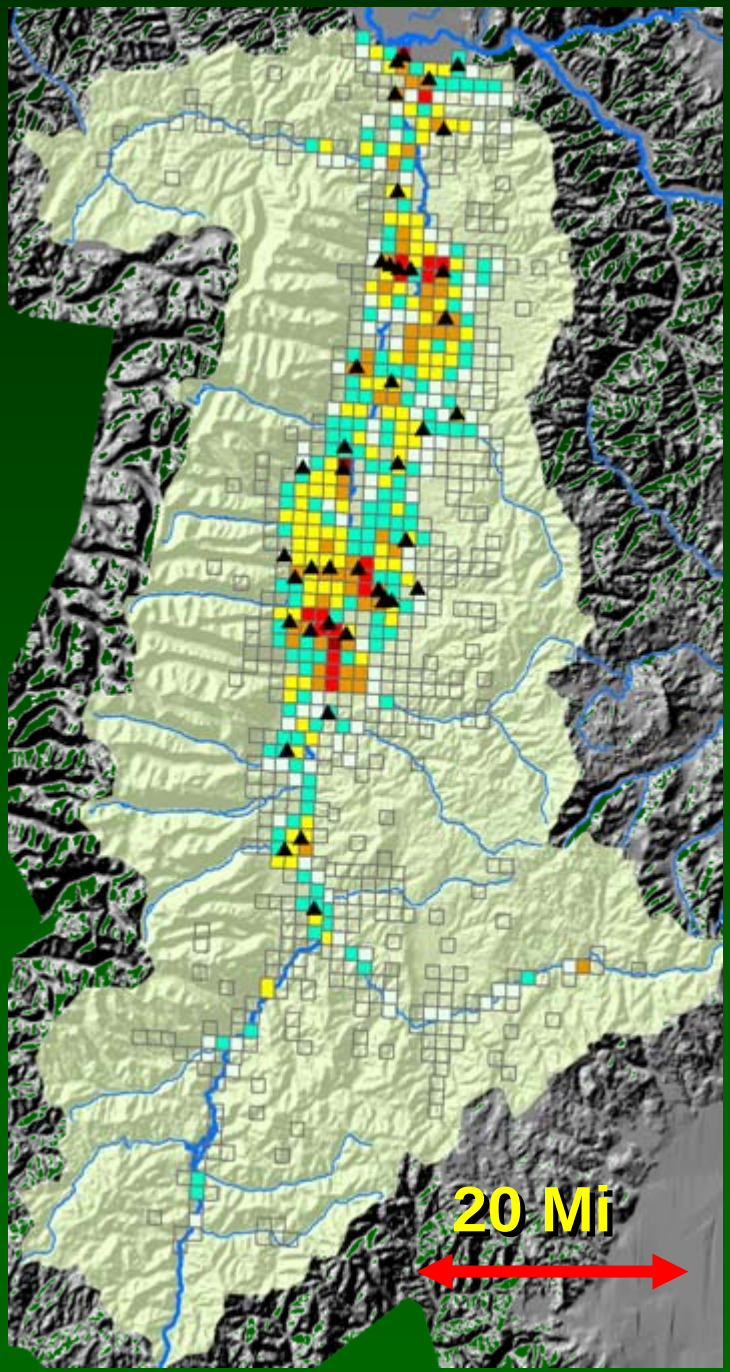
Total number of Clark Fork Basin aquifer tests in GWIC **22**

Montana needs to capture aquifer test data in the same manner that it acquires water-well log data. The provision to do so ideally would be made in statute.



Water-level monitoring

- Impacts from new water development projects will more and more be defined though numerical modeling.
- Model results must be calibrated to long-term water-level records.
- The statewide monitoring network in heavily populated areas must be enhanced.



Water-level monitoring

- Dedicated monitoring wells must eventually replace “wells of opportunity” in sub-networks such as in the Bitterroot.
- Additional recorders should be installed to provide the amount and quality of information needed to support models.
- GWAA at MBMG needs a FTE to manage the network to insure that the best data possible can be obtained.